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be placed in a watch-glass with a little of the solution, and kept at a temperature of about 50° C. until the chloroform has escaped. In case of larger objects they may be transferred directly from the solution to pure paraffine, without undergoing the slow process of evaporation.

Kossmann transfers the object directly from pure chloroform to pure paraffine, and allows it to remain in the paraffine (kept at a constant temperature of 50° C.) for several hours—sometimes for two or three days.

DR. SCHULGIN'S MIXTURE FOR IMBEDDING.[1]—Instead of pure paraffine, Dr. Schulgin uses a mixture of paraffine with ceresin, a substance somewhat similar to wax, but firmer and much less brittle. Paraffine which melts at 55° C. is recommended; and the amount of ceresin to be added to a given amount of paraffine may be determined by experiment. The finest sections of this substance are not brittle, and herein lies the chief excellence of the mixture. If this mixture proves too hard, it may be softened by adding a little vaseline.

EAU DE JAVELLE AS AN AGENT FOR REMOVING THE SOFT PARTS FROM MICROSCOPICAL PREPARATIONS.—Perls,[2] Altmann and Noll[3] recommend *Eau de Javelle* ($KClO_2$) as an excellent fluid for removing the soft parts of animal and vegetable tissues. If a piece of Spongilla, for example, is placed on a slide and a drop of this water added, all the soft parts are destroyed in 20–30 minutes, and the spicula are left *in situ*. After the protoplasmic parts have been thus removed, the preparation is carefully treated with acetic acid, in order to remove any cloudy precipitates; then washed with weak, strong and absolute alcohol successively; and finally mounted in oil of cloves and balsam.

Very neat preparations of diatoms may be obtained with this fluid. The calcareous part of shells thus treated is not destroyed. Sections of plant buds were successfully treated and then mounted in Meyer's fluid (10 volumes glycerine, 20 dist. water and 1 salicyl-methyl acetate).

The skeletons of small animals may be easily prepared by placing the bodies in Eau de Javelle, which removes the skin, muscles, &c., without injuring the bones.

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SCIENTIFIC NEWS.

— The Balfour Memorial.—The form which the Balfour Memorial has taken makes it a subject of far more general interest than could have been the case had the testimonial been merely a personal tribute to the man, great as he was. An American committee has been formed with the object of increasing the fund on this side of the water. Mr. Alexander Agassiz, of Harvard University, is chairman, and Professor H. N. Martin, of Johns Hopkins University, is secretary and treasurer of the committee, which is made up of scientific men representing widely separate regions. The following extracts from the statement of the secretary of the American committee, invoke the aid of every one to whom the advancement of biological knowledge is not a matter of indifference:

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[1] *Zoologischer Anzeiger*, VI, No. 129, p. 21, 1883.

[2] Arch. f. microscop Anat., vol. XVI, 1879.

[3] *Zoolog. Anzeiger*, V, No. 122, p. 528.

"The Balfour Memorial first took definite form at a public meeting held in the lecture-room of comparative anatomy in the University of Cambridge, England, on the 21st of last October.

"At this meeting it was determined to found a memorial to Professor Balfour, and that this memorial should take the form of a fund, to be called the Balfour fund, for the promotion of research in biology; especially animal morphology. It was further decided that the proceeds of the fund be applied:

"(1) *To establish a studentship, the holder of which shall devote himself to original research, especially in animal morphology.*

"(2) *To further, by occasional grants of money, original research in the same subject.*

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"(1) *That the value of the studentship be not less than £200 a year.*

"(2) *That while it is desirable that the studentship should be in some way closely connected with this university, persons other than members of this university shall be eligible to it.*

"(3) *That it shall not be given away by competitive examination.*

"(4) *That in framing regulations both for the conduct of the student and the award of occasional grants, the primary object of the fund, namely, the furtherance of original research, be closely adhered to.*

"It will be the aim of the trustees to select as Balfour student, not the man who shows best in answering examination papers, but in Dr. Michael Foster's words, to choose 'not necessarily the cleverest or the most brilliant man, but the man who in their judgment will best carry out the objects of the fund; that is to say, the man who seems most likely to devote himself with success to biological research.' The income exceeding £200 per annum derived from the endowment, will be utilized from time to time for such purposes as providing the Balfour student with expensive apparatus and specimens; in sending him to parts of the world especially fitted for his work; or in making grants for apparatus or material to others of limited income engaged on morphological research. The value to science of such a fund can hardly be overestimated; and the larger it is the greater will be its usefulness.

"At the Cambridge meeting referred to, subscriptions were promised sufficient to endow the Balfour studentship. All that is in future contributed will go to increase the power to make additional grants for special researches. What the American committee hope for, is not to raise a large sum of money but to obtain some small contribution from the majority of American biologists, whether investigators, professors or students. Some subscription, however small, from the members of each college and university in the United States where biological studies are carried on, would be a far more pleasing tribute to Balfour's memory than larger gifts from fewer persons."

— The *Scientific American* quotes from the *Sun* an account of the occurrence of a Filaria in the eye of a horse in Jersey City. The writer of the article says, "I do not believe that this parasite is ever found in human beings." *Filaria oculi* is stated however in Moquin-Tandon's Medical Zoology to be not uncommon in the negroes on the Angola coast; " it is also met with at Guadeloupe; it has been seen by Mongin at Cayenne, and by Blot at Martinique." "The *Filaria oculi* resides in the lachyrmal gland and in the globe of the eye. In 1768, Bajou extracted one of these worms from the eye of a young negress about six or seven years of age. Dr. Guyon extracted another from the eye of a negress in Guiana. The worm is seen winding about and moving around the globe of the eye, in the cellular tissue which unites the conjunctiva with the sclerotic. Sometimes its presence does not occasion any disagreeable sensation (Bajou); while at other times it causes very acute pain (Mongin). Occasionally it is accompanied by a constant watering of the eye." The Filaria of the crystalline lens *(F. lentis)* Diesing is found in that part of the eye. M. Normann detected the Filariæ coiled up together, by means of the microscope, half an hour after the operation for cataract. Two similar cases occurred in Germany.

— In connection with the recent discussions on solar energy, it has been lately noted by M. Rey de Morande, in the Paris Academy, that fossil botany has given a new extension to Laplace's hypothesis of a gradual contraction of the sun. The extensive coal-beds found in polar regions appear to show that these latter, at one time, received nearly as much of the solar light and heat as equatorial regions. So long as the sun was of such a diameter as to heat and light the two poles, there was great uniformity in our planet's vegetation, but about the Cenomanian epoch (*i.e.*, middle Cretaceous) this state of thing ceases rather rapidly. Plants with caducous leaves appear first in northern regions, and gradually spread southwards, confining arborescent ferns and other primitive plants to an ever-narrowing equatorial zone. In the polar regions, moreover, vegetation disappears. These facts, according to the author (following Dr. Blandet), are explained by the gradual contraction of the sun, but remain inexplicable by the simple hypothesis of a gradual cooling of the earth.—*English Mechanic.*

— It appears by Gen. Sheridan's report to the War Department that the National Yellowstone park is rented out to private parties who are using it for money-making purposes. While it was the original intention to make it a game preserve, since its discovery as many as 4000 elk have been killed by "skin-hunters," 2000 having been destroyed last winter alone, together with deer, mountain-sheep, etc. Gen. Sheridan recommended, says the *Nation*, that the park be extended in an easterly direction about 40 miles, so as to add 3344 square miles to its area, and "make a preserve for the large game of the West now so rapidly decreasing."

— At a recent meeting of some members of the general committee of the British Association, says the *English Mechanic*, it was determined to memorialize the council with reference to the proposed visit to Canada. The question has been under consideration for some time; and it is probable that the meeting will be held as usual in this country for the transaction of formal business, and will then be adjourned to Montreal. A suggestion is, that the meeting should be held in England, and a deputation be sent to Canada—the deputation, presumably, including all who wish to go. See NATURALIST for 1882, page 896.

— The French Minister of Agriculture has lately placed at the disposal of M. Pasteur a new sum of 50,000 fr. ($10,000), in order to continue his admirable investigations upon the contagious diseases of animals. The government had already granted to the illustrious savant, for the same object, 50,000 fr. in 1880 and 40,000 in 1881. The minister consulted a special committee, who, in view of the brilliant success obtained by Pasteur in his previous investigations, unanimously recommended a renewal of the grant.—*Scientific American.*

— The Saturday lectures under the auspices of the Biological and the Anthropological Societies of Washington are in course of delivery in the lecture-room of the U. S. National Museum, Saturday afternoons. The programme for the first six lectures is as follows: Capt. Clarence E. Dutton, U.S.A., on rivers; Professor Otis T. Mason, on the races of men; Mr. George Kennan on mountains and mountaineers of the Caucasus; Dr. D. Webster Prentiss on mesmerism in animals (with experiments); Professor Theodore Gill on mythical animals; and Dr. John S. Billings, U.S.A., on germs and epidemics.

— The U. S. S. *Enterprise*, Commander A. S. Barker, sailed Dec. 27 for the Cape Verde islands and the China station via Cape Town. The *Enterprise* has the outfit necessary for a scientific cruise, and will take deep-sea soundings every hundred miles from the United States to Cape Town.

— Prof. von Bischoff, the distinguished biologist, died in Munich, Dec. 5. He was born at Hanover in 1807, and having studied medicine, he became a lecturer on pathological anatomy at Heidelberg, whence he migrated to Giessen as professor of physiology. He was, however, attracted in 1854 to Munich by the King of Bavaria, and remained until his death. He was the author of important memoirs on the development of the vertebrates, especially of the dog, guinea pig, and the roebuck.

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PROCEEDINGS OF SCIENTIFIC SOCIETIES.

BIOLOGICAL SOCIETY OF WASHINGTON, Jan. 19.—Professor Theo. Gill, the retiring president, delivered the retiring address entitled "The principles of zoo-geography." Communications were made by Dr. Elliott Coues on zoölogical nomenclature applied to histology; by Professor Otis T. Mason on the human fauna of the District of Columbia.

NEW YORK ACADEMY OF SCIENCES, Jan. 22.—The following papers were read: On the treatment of sea-sickness by the trance state, by Professor Edward P. Thwing; Notes on the botany, geology and resources of Southern Texas and Chihuahua, by Dr. John S. Newberry.

Jan. 29.—The following paper was presented: The decay of the building-stones of New York City (with lantern illustrations from American and foreign architecture), by Dr. Alexis A. Julien.

Feb. 5.—The following papers were read: On a large mass of Cretaceous amber, from the marl of Gloucester county, N. J., by Mr. George F. Kunz; Remarks concerning the recently discovered reticulated structure of living matter, and the "bioplasson doctrine," by Mr. Romyn Hitchcock.

APPALACHIAN MOUNTAIN CLUB, Boston, Jan. 10.—Mr. Wm. C. Bates read a paper on Jamaica mountain scenery.

BOSTON SOCIETY OF NATURAL HISTORY, Jan. 17.—Dr. S. Kneeland spoke of the native races of the Philippines and Indian ocean.

Feb. 7.—Dr. M. E. Wadsworth gave some instances of atmospheric action on sandstone. Mr. Lucien Carr discussed the social and political position of woman among the Huron-Iroquois tribes; and Mr. John A. Jeffries spoke of the dermal appendages of birds.